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JKN participation in accessing health services during the COVID-19 period in Sleman Regency (secondary data analysis of HDSS 2020)

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Abstract

Purpose: Participation in JKN (Jaminan Kesehatan Nasional) is one of the factors that has a positive effect on healthcare utilization. The utilization of JKN has continued to increase, reaching 276.1 million visits in 2019. However, the COVID-19 pandemic has caused disruptions in the utilization of healthcare. Visits to health facilities are reported to have decreased, with 224.7 million visits in 2020. This research aims to describe utilization patterns based on the type of health facilities visited and determine the relationship between JKN participation and other factors on health service utilization during the COVID-19 pandemic. **Methods:** Descriptive analytical study with a cross-sectional design using secondary data from the Health and Demography Surveillance System (HDSS) 2020 cycle 6. The quantitative data analysis was conducted using univariate, bivariate, and multivariate analyses. **Results:** 69.77% of respondents used healthcare, while 30.23% did not. Other health facilities, particularly pharmacies, were the most commonly used choices by respondents to address their health problems. Not being sick enough to receive treatment (83.94%) and fear of contracting COVID-19 (11.92%) were the primary reasons respondents cited for not accessing healthcare. There was no significant correlation between the variables of JKN involvement, age, gender, education level, marital status, economic status, and residence location and the use of healthcare services ($p > 0.05$). The most critical variable was a history of NCD ($p<0.05$). **Conclusion:** The need factor, combined with the history of NCD, is the primary predictor of health service utilization among the people of Sleman Regency during the COVID-19 pandemic.

Keywords: COVID-19; factors; health facilities; JKN membership; utilization of healthcare

INTRODUCTION

The increase in COVID-19 cases has been rapid, spreading to various countries, including Indonesia, in a short time since its initial detection in Wuhan, China, at the end of 2019 [1]. The COVID-19 pandemic has had a significant impact on all sectors, including the healthcare sector. WHO (2020) reported that access to various essential health services was disrupted and, in some cases, even temporarily halted at the beginning of the pandemic [2]. As a result, the utilization of health services decreased [3,4]. This can lead to risks in the form of morbidity and mortality from other diseases that could have been prevented and treated [5]. Changes in the utilization of health services have

occurred in almost all regions, including Sleman Regency. The study by Manusubroto et al. (2020) showed that at the beginning of the COVID-19 pandemic, a decrease in utilization in emergency and outpatient services occurred in hospitals in Sleman Regency due to hospital policies to reduce the number of specific procedures and appeals not to travel, including to health facilities [6].

The actual utilization of health services is not a simple thing because there are various influencing factors such as health insurance ownership, demographic factors, access, income, disease history, and the conditions of the COVID-19 pandemic itself [7,1]. Health insurance ownership is one of the enabling factors that has a positive effect because it makes health services more accessible to the community [7]. However, the COVID-19 pandemic in 2020 resulted in decreased utilization of health services, with a total of 224.7 million visits [8]. If the disruption of health service utilization during the COVID-19 pandemic continues, it can have an impact on the occurrence of unwanted morbidity and mortality. Therefore, it is necessary to research to examine the effect of JKN membership and other factors that can affect the utilization of health services during the COVID-19 pandemic. This study aims to: 1) describe health service utilization patterns based on health facilities visited, 2) identify the relationship between JKN membership and health service utilization during COVID-19, and 3) identify factors that influence health service utilization during COVID-19 in Sleman Regency.

METHODS

This type of research is an analytical observational study with a cross-sectional design using secondary data from the Health and Demographic Surveillance System (HDSS), Sleman cycle 6. The population of this study consisted of all residents in Sleman Regency who had resided there for at least six consecutive months. They were identified as respondents in the survey conducted by HDSS in cycle 6 of the 2020 period, with a total of 1,515 respondents. The sampling method used was purposive sampling, specifically targeting respondents who had experienced health problems or illness during the COVID-19 pandemic, resulting in a sample size of 612 respondents. The independent variable in this study was JKN membership. Covariate variables were age, gender, education level, marital status, economic status, location of residence, and history of non-communicable diseases (NCDs). The dependent variable was health service utilization during the COVID-19 pandemic. Data analysis consisted of univariate analysis using frequency distribution tables, bivariate analysis using the chi-square test, and multivariate analysis using logistic regression.

RESULTS

Figure 1 shows the types of health facilities, starting from the most visited, were other health facilities (33.96%), hospitals (24.36%), general practitioners' practices (22.48%), Puskesmas/Pustu (16.63%), and clinics (2.58%). Other health facilities consisted of midwife practices, nurse practices, specialist practices, pharmacies, online consultations, and traditional medicine. Pharmacies are the most visited places by respondents, as 103 out of 145 respondents who visited other health facilities preferred to use pharmacies to overcome health problems/sickness experienced during COVID-19. Not all respondents utilized health services. Not being sick enough to seek treatment and fear of contracting COVID-19 were the two most common reasons respondents did not utilize health services. The results of bivariate and multivariate analysis are in Tables 1 and 2. Variables that have a significant relationship with health service utilization based on the results of bivariate analysis are age, economic status, and respondents' NCD history (P<0.05).

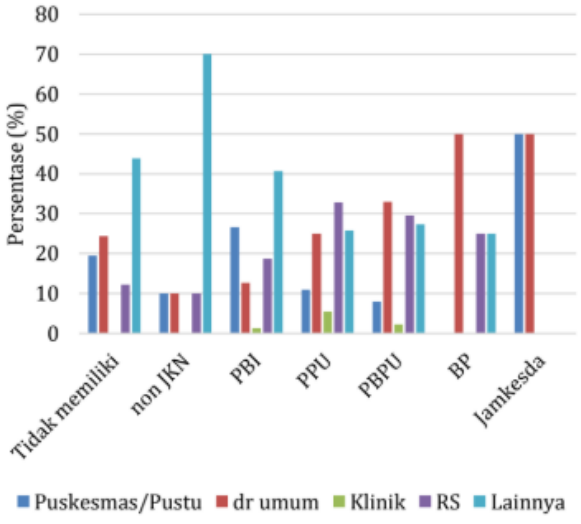

Figure 1. Utilization by type of health facility visited

Table 1. Results of bivariate analysis

Characteristics	Utilization of health services				p-value	OR (95% CI)
	not utilize		utilize			
	n	%	n	%		
JKN participation						
Not having access	26	38.81	41	61.19	0.207	Ref
Non-national health insurance (non JKN)	2	16.67	10	83.33		3.17 (0.64 – 15.64)
Participant in contribution assistance (PBI JKN)	75	33.33	150	66.67		1.27 (0.72 – 2.23)
Wage earning workers (PPU JKN)	42	24.71	128	75.29		1.93 (1.06 – 3.53)
Independent workers (PBPU JKN)	38	30.16	88	69.84		1.47 (0.79 – 2.73)
Non workers (BP JKN)	1	11.11	8	88.89		5.07 (0.59 – 42.95)
Regional health security (Jamkesda)	1	33.33	2	66.67		1.27 (0.11 – 14.70)
Age (years)						
25 – 44	94	36.58	163	63.42	0.013*	Ref
45 – 59	77	26.19	217	73.81		1.63 (1.13 – 2,34)
60 – 74	14	22.95	47	77.05		1.94 (1.01 – 3.70)
Gender						
Man	66	32.84	135	67.16	0.326	Ref
Woman	119	28.95	292	71.05		1.19 (0.83 – 1.73)
Education level						
Low	37	36.27	65	63.73	0.261	Ref
Middle	110	29.97	257	70.03		1.33 (0.84 – 2.11)
High	38	26.57	105	73.43		1.57 (0.91 – 2.72)
Marital status						
Unmarried	15	45.45	18	54.55	0.137	Ref
Married	152	29.12	370	70.88		2.03 (0.99 – 4.13)
Divorce	18	31.58	29	68.42		1.81 (0.75 – 4.37)
Economic status						
QI	26	32.50	54	67.50	0.018*	Ref
Q2	36	38.30	58	61.70		0.78 (0.41 – 1.45)
Q3	47	36.72	81	63.28		0.83 (0.46 – 1.50)
Q4	43	27.74	112	72.26		1.25 (0.69 – 2.25)
Q5	33	21.29	122	78.71		1.78 (0.97 – 3.26)
Location of residence						
Rural	34	34.00	66	66.00	0.369	Ref
Urban	151	29.49	361	70.51		1.23 (0.78 – 1.94)
History of non-communicable diseases						
None	147	37.22	248	62.78	0.000*	Ref
1 non-communicable disease	34	19.77	138	80.23		2.41 (1.57 – 3.69)
≥ 2 non-communicable diseases	4	8.89	41	91.11		6.06 (2.13 – 17.31)

*significant (p<0,05)

Based on the results of multivariate analysis, the variable that significantly influenced the utilization of health services during COVID-19 was the history of NCDs. Respondents with a history of NCDs had a 2.23 times higher likelihood of utilizing health services. In contrast, those with ≥2 histories of NCDs were 4.72 times more likely to do so than those without a history. The JKN participation was not associated with health service utilization during COVID-19. However, the tendency of service utilization was higher among respondents who participated in the National Health Insurance (JKN). The adjusted OR value indicates a higher tendency towards utilization among respondents who are participants in JKN. Although age had no significant association with health service utilization, the tendency of service utilization was higher among respondents aged 24 - 59 years and 60 - 74 years compared to those aged 5 - 44 years, with adjusted OR values of 1.37 and 1.59, respectively. Gender and education level were not associated with health service utilization. However, respondents with secondary education had a 1.28 times higher propensity, while respondents with higher education had a 1.26 times higher propensity to utilize health services compared to respondents with lower education. Married respondents had a higher tendency to utilize health services compared to unmarried respondents, although it was not statistically significant. Economic status does not have a significant relationship with health service utilization during COVID-19. Although not significant, health service utilization tended to be higher among respondents with the richest economic status compared to respondents in the poor category, with an adjusted OR value of 1.23. The location where respondents live was also reported to be unrelated to service utilization (p>0.05).

Table 2. Results of multivariate analysis

Characteristics	Utilization of health services				p-value	OR (95% CI)
	not utilize		utilize			
	n	%	n	%		
JKN participation						
Not having access	26	38.81	41	61.19	Ref	Ref
Non-national health insurance (non JKN)	2	16.67	10	83.33	0.197	2.95 (0.57 – 15.24)
Participant in contribution assistance (PBI JKN)	75	33.33	150	66.67	0.388	1.30 (0.72 – 2.36)
Wage earning workers (PPU JKN)	42	24.71	128	75.29	0.301	1.41 (0.74 – 2.70)
Independent workers (PBPU JKN)	38	30.16	88	69.84	0.751	1.11 (0.58 – 2.15)
Non workers (BP JKN)	1	11.11	8	88.89	0.266	3.44 (0.39 – 30.35)
Regional health security (Jamkesda)	1	33.33	2	66.67	0.769	1.47 (0.11 – 19.20)
Age (years)						
25 – 44	94	36.58	163	63.42	Ref	Ref
45 – 59	77	26.19	217	73.81	0.123	1.37 (0.92 – 2.06)
60 – 74	14	22.95	47	77.05	0.229	1.59 (0.75 – 3.42)
Gender						
Man	66	32.84	135	67.16	Ref	Ref
Woman	119	28.95	292	71.05	0.439	1.17 (0.79 – 1.74)
Education level						
Low	37	36.27	65	63.73	Ref	Ref
Middle	110	29.97	257	70.03	0.357	1.28 (0.76 – 2.18)
High	38	26.57	105	73.43	0.511	1.26 (0.62 – 2.59)
Marital status						
Unmarried	15	45.45	18	54.55	Ref	Ref
Married	152	29.12	370	70.88	0.328	1.47 (0.68 – 3.24)
Divorce	18	31.58	29	68.42	0.689	1.22 (0.45 – 3,31)
Economic status						
QI	26	32.50	54	67.50	Ref	Ref
Q2	36	38.30	58	61.70	0.309	0.71 (0.37 – 1.37)
Q3	47	36.72	81	63.28	0.316	0.73 (0.39 1.35)
Q4	43	27.74	112	72.26	0.892	1.04 (0.5 – 2.02)
Q5	33	21.29	122	78.71	0.593	1.23 (0.57 – 2.65)
Location of residence						
Rural	34	34.00	66	66.00	Ref	Ref
Urban	151	29.49	361	70.51	0.441	1.21 (0.75 – 1.96)
History of non-communicable diseases						
None	147	37.22	248	62.78	Ref	Ref
1 non-communicable disease	34	19.77	138	80.23	0.000*	2.23 (1.43 – 3,47)
≥ 2 non-communicable diseases	4	8.89	41	91.11	0.004*	4.72 (1.63 – 13.73)

*significant (p<0.05)

DISCUSSION

Pharmacies are the most widely used choice by respondents to overcome health problems experienced during the COVID-19 period. This is in line with the research of Nurlena et al. (2021), which reported that most people prefer to do self-medication by buying drugs at pharmacies [9]. The reason is that people are afraid of contracting COVID-19 if they have to visit hospitals or other health services that are considered riskier. Arshad et al. (2020) also reported the same results, people's behavior in seeking health services changed during the COVID-19 pandemic, as indicated by an increase in self-medication by 10%. JKN participants are those who utilize the most health facilities, including those not covered by JKN, compared to non-JKN participants and those without health insurance. The JKN program has a positive relationship with health service utilization because it can increase the likelihood of people seeking health services[10]. The JKN program is considered to alleviate financial barriers associated with the cost of medical care. Despite improvements in health services for participants, utilization of these services during the COVID-19 pandemic has reportedly decreased. BPJS (2021) reported that in 2020, total visits to health facilities only reached 224.7 million from 276.1 million visits in 2019 [11]. Perceptions of illness and the level of anxiety about contracting COVID-19 are related to people's consideration to utilize health services again during the COVID-19 pandemic [12]. According to a study, the most common reasons respondents did not utilize health services were not being sick enough to seek treatment and fear of contracting COVID-19. Perception of illness is related to treatment-seeking behavior. Someone who has a negative perception of disease tends to underutilize health services.

Conversely, people will only seek health services when they cannot do anything and interfere with daily activities [13]. Fear of contracting COVID-19 is also the most common reason respondents do not utilize health services. People who report fear of contracting the virus or increasing the number of infections in people around them tend to avoid visiting health facilities for fear of infection [14]. Therefore, people with fear exhibit precautionary behavior, avoid health facilities, and contribute to unmet medical care.

JKN membership does not have a significant relationship with health service utilization. In contrast to other research, health insurance ownership was reported to be significantly associated with health service utilization and able to increase health service utilization for participants [15]. However, the results of this study are in line with research, JKN ownership does not affect health service utilization [16]. The reason is that, despite being JKN participants, most people do not use it to get the necessary health services. This is consistent with the results of the study, which show that there are still many JKN participants who do not visit health services when experiencing health problems and do not use them to get health services because they prefer to utilize other health facilities such as midwife practices, nurses, specialist doctors, pharmacies, or traditional medicine.

The age variable is not associated with health service utilization. The findings of this study align with those of another study [17], which reported that age was not significantly associated with health service utilization behavior. In contrast, research in Gauteng Province, South Korea, indicates that health service utilization increases with age [15]. The chance of utilizing health services increases by 2% for every additional year of age, and this is statistically significant.

Female respondents tended to utilize health services more frequently than males, although this difference was not statistically significant. This is consistent with a study in Ethiopia, which reported that although not statistically significant, health services were utilized more by people of the female gender [18]. The female community is 1.82 times more likely to use health services compared to men. The same thing was also conveyed by those who stated that women (76.9%) use health services more than men (53.7%) because they are influenced by a higher response to their physical and mental conditions or to accompany their children to seek treatment, as well as for themselves [19].

Education level does not have a significant relationship with health service utilization. Research found no significant relationship between education and the utilization of one of the hospitals in Semarang city ($p>0.05$) [20]. In contrast to Andersen's (1995) theory, which posits that each individual's social structures, including education and occupation levels, lead to differences in health service usage patterns [21]. Individuals with higher levels of education are more likely to utilize health services due to their greater awareness of the importance of seeking medical attention when experiencing health problems [22].

Health services are more widely utilized by respondents who are married compared to those who are unmarried or divorced, although this difference is not statistically significant. This is in line with the results of research in Afghanistan, which states that the utilization of outpatient and inpatient services is higher among those who are married than those who are not married [23]. Marriage can influence health status not only through support and protection but also through more efficient health service utilization patterns [24].

Economic status did not have a significant relationship with health service utilization. However, health service utilization tended to be higher among respondents with the richest economic status (Q5) than among those in the poorest category (Q1). In addition, the results of this study are also in line with the study, which reported that a rich person is 4.02 times more likely to use health services than a poor person [25]. This is because a person who can afford the cost of services and other expenses associated with health services is more likely to utilize health services.

Location of residence was also reported to have no significant relationship with health service utilization. In contrast to research conducted by Putri and Pujianto (2019) [26], the region of residence is one of the factors that has a significant effect on health service utilization. Respondents living in urban areas are twice as likely to utilize health services compared to those in rural areas, due to the greater availability of health facilities and easier access.

The history of NCDs has a statistically significant relationship with health service utilization. The history of NCDs is the most influential variable on health service utilization during COVID-19. Respondents who have ≥ 2 histories of NCDs tend to be 4.72 times more likely to utilize health services than respondents who do not have a history of disease. The results of this study are based on a study that found that disease history has a significant impact and is a major predictor of health service utilization [27]. Respondents with a history of illness were 13 times more likely to visit a primary health facility in the past month and 6.2 times more likely to visit a hospital in the past 12 years. The same thing was also reported health service utilization is higher among respondents who have more than one history of illness [20]. Respondents with

more than one history of illness utilize health services more because they experience a decrease in body function, have complex needs, and require comprehensive care.

Therefore, the local government, together with the Health Office and BPJS Kesehatan, is expected to intensify health visits in the JKN program, especially for people who have a history of NCDs. In addition, it is necessary to initiate cooperation between JKN health service providers and Posbindu (Integrated Coaching Post) to expand service coverage through promotive and preventive activities. A more user-friendly telemedicine service based on telephone or SMS also needs to be developed so that older people can access it more easily.

This research is not without several limitations. The limitations of this research are that it does not represent respondents who experienced health problems or illness during the COVID-19 pandemic in Sleman Regency. This is because data collection in the HDSS cycle six health access and facilities module was conducted individually by each panel. Data were collected from one respondent aged 25-64 years in each Sleman HDSS household. Consequently, respondents with health problems who were not included in the sample selection and who were aged <25 years or >64 years were not recorded in the collected data. In addition, this study lacks a qualitative perspective based on respondents' views on why they use specific facilities to address their health issues during the COVID-19 pandemic.

CONCLUSION

Other health facilities are the category of health facilities most utilized by people in Sleman Regency during the COVID-19 pandemic. Pharmacies are a more utilized option to address health problems. JKN membership does not have a significant relationship with the utilization of public health services in Sleman Regency during the COVID-19 pandemic. The need factor, a history of NCDs, is the main predictor of people in Sleman Regency in utilizing health services during the COVID-19 pandemic.

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